THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

NEW SERIES.] THURSDAY, AUGUST 15, 1872. [VOL. X.—NO. 7.

Original Communications.

PALPATION IN OBSTETRICS

AS PRACTISED IN GERMANY.

By JAMES R. CHADWICK, M.D. Harv., Boston.

ATTENTION has of late been called to the abdominal examination and manipulation of the pregnant woman as performed in Germany, and more especially in Vienna. An attempt to state in detail the method there employed, and to consider some of its effects upon obstetric teaching and practice, may not be out of place.

The subject is one which is almost ignored in American and English textbooks, and is but imperfectly taught in the German treatises. The Vienna School probably makes more of this method than any other, but, unfortunately, the works of the Professors, Carl Braun and Joseph Spaeth, are so old, that the views of the writers have in many respects changed since these were published, and the books cannot, therefore, be regarded as reliable exponents of the authors' opinions at the present day.

From the verbal teachings of the various professors must therefore be drawn the inspiration which should guide the pen of one who ventures to detail the procedure followed, and the results claimed for this method of practice. That the latter are very great and essentially practical, I would insist upon from the outset, as proved to me from personal observation in the clinics of Vienna and Würzburg. Direct application has been made to the above-mentioned professors and to their assistants, to have all dubious points in their teachings settled.

In thus laying before his professional brethren in America the details and advantages of a comparatively unappreciated subject, the writer will readily be pardoned if he recounts, *in extenso*, the steps to be taken and the inferences to be drawn in all circumstances. That the promised results are not to be gained by an inexperienced hand, must be realized, from the outset, by such as may make a practical use of the following pages. Let those who choose to test the value of this method, not condemn it, if they cannot leave the first or even the twentieth bedside, with "Veni, vidi, vici" upon their lips.

Abdominal examination consists in *inspection, percussion, auscultation and palpation.*

Inspection of the abdomen informs us as to its volume and form; the tension of its walls—the discoloration and scars upon its integument—the changes of the umbilicus—the impediment to respiration, and condition of the ribs; sometimes shows us the movements of the child or of flatus—the twitching of the abdominal muscles—and occasionally a thrill from pulsation of the aorta.

Percussion informs us as to the consistence of the contents of the abdomen, giving the size and height of the womb, as well as, imperfectly, the nature of its contents, the presence of ascites, flatus, or a full bladder.

"The object of *auscultation* is to recognize the fœtal heart-sounds, and the maternal vascular murmurs, and to distinguish them from the transmitted heart-sounds of the mother—from the spontaneous movements of the fœtus—from the umbilical murmur—from the gurgling of gases, and the splashing of fluids in the intestines—and from the aortal pulse." [C. Braun.]

I shall confine myself to this brief definition of the scope of these first three divisions, in regard to which American practice does not materially differ from the German, and shall proceed at once to the subject of this paper—

Palpation, in its two-fold Application to Diagnosis and Treatment.

For the purposes of diagnosis, palpation is the determination of the volume, consistence, form and position of the uterus—the size, position, presenting part and spontaneous movements of the fœtus—the presence of more than one fœtus, or of complicating abdominal or pelvic tumors—the life of the fœtus—the transmitted thrill of the aortal pulse—the fulness of the urinary bladder—the presence of ascites, and, in some measure, the question of a previous birth, by the *sense of touch through the abdominal walls.*

Preliminaries.—The woman, to be examined, should be flat upon her back on a bed; her legs should be drawn up, and her head supported, in order to relax the abdominal muscles and integuments. Corsets, drawers, and all constricting bands about the abdomen or chest should be removed. A sheet should cover the lower extremities, and the night-dress or chemise be drawn up under her breasts, thus leaving the abdomen alone exposed. Should modesty require, the sheet, being the cleaner and looser of the two, may be brought up over the abdomen, though this will interfere, somewhat, with a satisfactory examination. The physician's hands should be warm.

Manual of Palpation.—Standing upon the right of the woman, the physician lays his hands upon her abdomen, and proceeds to explore its contents, as revealed to the touch. This is performed by moving the hands, step by step (so to speak), over its surface, while they are rounded over the inequalities, made prominent by pressure, so as to form an idea of the configuration of what is within. This is best effected by a general "pawing" motion, during which the hands are kept nearly flat upon the abdomen, the pressure upon which is not constant in any one spot, for a rocking motion is imparted to the hands by alternate flexion and extension of the wrist and of the metacarpo-phalangeal articulations. The hands are, during this action, either moved along side by side in the same region of the abdominal surface, or at opposite sides of the abdomen; then the one steadies the uterus and fœtus, while the other studies their angles and form. The latter course is most useful, when the abdominal contents are very movable.

When it is wished to test the consistence or mobility (including ballottement) of the underlying parts, the very tips of the fingers of one hand should, *first,* be placed gently upon the abdominal integument, almost perpendicular to it, and *then,* by a forcible thrust downwards, be brought up against the parts below. As this should be a shove rather than a blow, it may best be executed by an action from the elbow, with stiff but slightly-flexed wrist and hands. In order to examine the presenting part of the fœtus, two other procedures are commonly followed. In the first, the right hand of the investigator, with thumb abducted, is laid, palm downwards, upon the abdomen immediately above the symphysis pubis, the thumb being near the middle of the left Poupart's ligament, and the fingers at the same point on the other side; the ring and middle finger come chiefly into play. The thumb and fingers are then thrust downwards into the abdomen, and approximated, until they grasp between them the presenting part of the fœtus. The distinguishing characteristics, of a presenting head or breech, may best be brought out by giving the part a sort of shake, with loosely grasping hands, by which it is tossed to and fro between the thumb and fingers.

The second method, of palpating the presenting part, is by laying the two hands flat upon the opposite sides of the abdomen, the points of the fingers being directed toward and lying just above the middle of Poupart's ligaments on each side; they are then thrust downwards and inwards towards the cavity of the pelvis, until they come upon and hold between them the presenting part. This method is rarely resorted to, unless the previous one yields an ambiguous or negative result. The examiner is by it enabled to explore deeper in the pelvis, and thus often reach a deep-seated head, which would not be accessible to the former procedure.

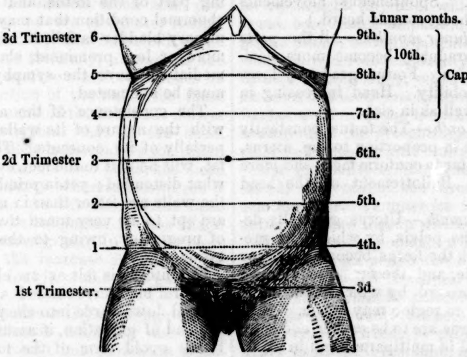
No force, sufficient to cause the woman any real pain, need ever be employed during these manipulations.

Attention to the minutiæ enumerated above is of importance, for a promiscuous punching will not only subject the woman to much discomfort and pain, but will also excite reflex contractions of the abdominal or uterine muscles, and thus defeat the object in view.

At the Bedside.—While facing the woman, the obstetrician lays his hands, with the fingers directed toward her head, upon the opposite sides of her abdomen, to make sure that the long axis of the fœtus corresponds to the longitudinal axis of the uterus; in other words, that he has a longitudinal position before him. This proved, he proceeds to estimate the period of the pregnancy by defining the height to which the fundus uteri rises. This may be done by depressing, as far as possible, the ulnar border of the left hand above the fundus, and measuring, while it is closely applied to the latter and in a perpendicular position, its distance from certain fixed points. The right hand should be occupied in supporting the body of the uterus, should it incline to fall away from the median line of the body.

The Period of the Pregnancy is determined chiefly from the height of the fundus, which depends, in the later months, almost entirely upon the size of the fœtus. The measurement of the abdominal circumference gives no data, as proved by Hecker, Spiegelberg and Richelot, who, for example, found, for the tenth month of pregnancy, variations of 88–116 cm. (H.), 84–108 cm. (S.) and 82–113 cm. (R.).

In transverse and twin pregnancies, this manner of diagnosticating the period gives untrustworthy results, for then the long axis of the uterus will be the transverse, and, in consequence, the fundus will not attain to the same altitude. The general size of the child or children, the size and hardness of the head or heads, and the testimony derivable from the vaginal examination, and from the statements of the mother, must then be relied upon.



The following are the rules to be observed in making the calculation.

The line connecting the symphysis pubis to the ensiform cartilage is supposed to be crossed, at right angles, by six equidistant transverse lines; two intersecting each of the spaces from the pubes to the umbilicus, and from the umbilicus to the tip of the ensiform cartilage, and one passing through each of the last two points.

The normal term of gestation, 280 days (reckoned from the commencement of the last menstruation), is then divided into ten lunar months; these, exclusive of the tenth month, are arranged in trimesters. During the first trimester the fundus uteri is rising to the level of the pelvic brim, and is not accessible to palpation; at the end of the second trimester it has reached the height of the umbilicus, and at the end of the third that of the ensiform cartilage. The altitude attained by the fundus at the end of the several months of each trimester corresponds to the other lines of the scale.

The distance between each of these lines is about equal to the breadth of two fingers, whence the common saying that the fundus stands "two fingers above the symphysis pubis, two fingers below the navel," &c., indicating the end of the fourth and the fifth lunar months respectively, and so on.

During the tenth lunar month, the uterus is generally supposed to be settling into the pelvis; therefore, although it has been increasing in size, the fundus has really been sinking from its position at the end of the ninth month. This descent is, however, far from constant, and should not be allowed for, until further abdominal and vaginal examination has confirmed the supposition. A complete descent of the uterus would, consequently, carry the fundus, in the course of the tenth lunar month, through the various altitudes, through which it had passed in its ascent during the ninth, and bring it finally, at the end of the tenth, to the level at which it stood at the end of the eighth. This is exceptional, so that it is more correct to place the normal height of the fundus, at the end of the tenth month, somewhere *between* the lines corresponding to the end of the eighth and ninth months, with the proviso that the fundus will not infrequently be found as high as the line of the ninth month.

In estimating the period of pregnancy, no mention has, thus far, been made of the other less reliable, but not unimportant, data to be obtained from palpation. These will be more fully described in other connections later, and will here be only mentioned as they successively appear in the several months.

4th lunar month.—The uterus is felt as a rounded, elastic tumor, above the symphysis pubis, and continued into the pelvis; its consistency is soft, and in multipara often uneven. It may be a little harder in several places adjoining the fœtal parts, but the latter are not distinctly felt. Ballottement through the abdominal walls is very rare.

5th lunar month.—Uterus a little to one side of the median line, generally to the right. Spontaneous movement of the fœtus, and abdominal ballottement rarely felt. (Fœtal heart-sounds, in rare cases, heard on auscultation.)

6th lunar month.—Fœtal parts, and, consequently, the presentation can commonly be made out. Spontaneous movements felt. (Fœtal heart-sounds heard.)

7th and 8th lunar months.—All the parts of the fœtus gradually become more manifest to palpation. Fœtus gradually loses its extreme mobility. Head increasing in hardness, as well as in size.

9th lunar month.—The fœtus, constantly gaining in size in proportion to the uterus, obliges the latter to conform more and more to its shape. Ballottement of the head commonly felt.

10th lunar month.—Uterus generally descends into the pelvis, by which the presenting part of the fœtus becomes more or less immovable, and the fundus is caused to fall more forward, by which a flattening of the epigastric region may ensue.

All these signs are to be earlier and more easily obtained in multiparæ than in primiparæ, owing to the greater tension of the abdominal walls in the latter. The fœtus is, of course, supposed to be alive.

This method of determining the period of the pregnancy will be found, in general, satisfactory, despite its manifest imperfections. Three points are important in applying it, however:—that the fœtus should not be in a transverse position; that the fundus should be in the middle line of the body; and that the bladder should be empty; it being evident that a dilatation of the uterus in a transverse direction would shorten its vertical axis, that any deflection of the womb from the median line of the body would lessen its apparent height, and that a full bladder might prevent the uterus from sinking to its proper level in the pelvis.

Fulness of the rectum is said to affect, in some measure, the height of the fundus uteri, but is rarely taken into account. The thickness of the abdominal walls is also to be considered and allowed for; it is determined by taking up a fold between the thumb and fingers. This gives another indication, for it has been proved that the amount of adipose tissue in the walls decreases with each successive pregnancy.

Deformity of the pelvis, of the vertical column, or of the thorax, an unusual amount of amniotic fluid, and the presence of complicating tumors may lead us astray, unless such conditions are discovered and allowed for.

Having thus settled, preliminarily, the duration of the pregnancy, subject, however, to modification or correction after the vaginal examination, the physician proceeds to diagnosticate the position and presenting part of the fœtus, and to detect any abnormal condition that may exist. If the urinary bladder is full, it will be felt as a more or less prominent, elastic tumor, immediately above the symphysis pubis, and must be evacuated.

The consistence of the abdomen varies with the nature of its walls, and more especially of its contents. The walls, when fat, will be soft to the feel, even when somewhat distended; yet in primiparæ, in whom the walls are fatter than in multiparæ, they are apt to be very tense towards the end of pregnancy, owing to the unusual dilatation.

The uterus is felt as an elastic, more or less firm bladder, rounded above and prolonged downwards into the pelvis. Toward the end of gestation, it assumes more nearly the ovoid form of the fœtus; it never, however, quite loses a slight antero-posterior groove in its fundus, the last trace of its formation by the union of Müller's ducts; this is more marked during a contraction. Its shape when pregnant (and uncontracting), or dilated from other cause, is acknowledged to be chiefly dependent upon its contents. Up to the seventh or eighth lunar months the uterus is so distended by the proportionately great amount of liquor amnii, that the fœtus floats free of its walls, and does not mar the symmetry of its rounded outline. After that time, however, the relation of the fœtus to the fluid is gradually reversed, and the uterus assumes, in a measure, the form given it by the fœtus.

Peculiarities of the Fœtal Parts.—The two great extremities of the fœtus, as it lies doubled up in the uterus, are the head and the breech; they are recognized by their individual peculiarities, and by the rounded terminal character common to both.

The head is felt as a round, hard body, entirely free from angles or even prominences, more movable than the breech, and more or less isolated (because of the hollow at the neck) from the neighboring resistant points. When the head is freely movable, one of its chief distinctive features is its *ballottement*, or quick rebound upon the exploring fingers, after a sudden push. The sensation imparted to the hand, in this case, is peculiar and characteristic, being such as is caused by a hard ball floating in a liquid. Its rebound is quicker and more bouncing than that of the breech—which alone could resemble it—because it swings from the body by the flexible neck, and thus describes the arc of a small circle only, whereas the breech, when thus propelled, describes an arc of greater radius, and is restrained by the inflexibility and greater inertia of the body, as well as the more extended surface which it exposes to the resistant action of the fluid; for these reasons the rebound of the breech is slower and less sudden than that of the head. This peculiar feel is enhanced by the different consistence of the two parts, the head being hard and bony, whereas the breech is soft and fleshy. As the size of the head increases, this ballottement is less marked, but as its bones gradually become more ossified, with the increase in size of the fœtus, what is lost in mobility is gained in hardness.

The breech is known by its being directly continuous with the back, by not being symmetrically round but somewhat pointed (the tuberosities of the ischia), by not being hard, and by not rebounding suddenly upon the fingers after a blow (ballottement).

The back is recognized by the long, uninterrupted resistant surface it presents to palpation. It is said that the spinous processes of the vertebræ can, in some instances, be felt; if so, the occurrence must be of extreme rarity.

The small extremities—the legs and arms—are generally detected as small, irregularly shaped bodies, easily pushed about by the hands, often spontaneously changing their positions, and frequently dealing blows to the hand of the observer.

The momentary application of cold to the abdomen is said to increase these spontaneous movements of the fœtus; it is inconceivable that the cold itself should penetrate to the fœtus and excite the unwonted activity, especially if we are to believe Hebra's statement, made in my hearing, that a thermometer, placed between the teeth and cheek, is not sensibly affected by the continued application of ice to the cheek externally; that the reflex nervous current, which might be excited in the woman, in such a case, could have an effect upon her uterus, and thus indirectly produce an impression upon the fœtus, is within the bounds of reason, though improbable. I have had no opportunity of verifying the truth of this assertion as to the application of cold.

At the Bedside.—Having first established the longitudinal or transverse position of the fœtus, and the period of the pregnancy, the next step is to decide upon the presentation which we may have before us.

Longitudinal Positions.—The *head* is first to be sought for, and will commonly be found, by suitable palpation, over the symphysis pubis; not unfrequently, it lies somewhat to one side, especially in the earlier months of pregnancy, when it is less crowded down into the pelvis by the pressure of the fundus uteri upon the breech. If not discoverered over the symphisis pubis, the head must be located in the vicinity of the fundus.

One extremity of the ovoid having been found, the other, the breech, is to be searched for. It must lie in the opposite vertical half to that in which the head lies.

The presenting part, whether head or breech, may be above the brim of the pelvis, where it will be freely movable, and easily accessible to palpation; or it may have descended into the pelvis, and become more or less fixed, in proportion to the depth to which it has sunk, and its size relatively to that of the pelvis. In the latter case, the presenting head *may* still be reached by palpation, or often the neck only, which can be recognized by its appearing, when grasped, too small to be either the head or the breech. The bimanual method of examining the presenting part may, in cases of "deep-seated head," be resorted to with success. When the breech has descended into the pelvis, the part seized by the hand is not small, but, consisting, as it does, of the body and perhaps the legs, it is as large and may even be larger than the breech itself. Bimanual palpation will here only confirm the deep seat of the breech.

The remaining regions of the abdomen are then to be explored to determine in which direction the *back* is turned, and in which quarter the small extremities lie. The *back* is commonly directed either to the right or the left side of the mother, and may be recognized rather by the greater resistance, imparted by it to the lateral half of the abdomen in which it is located, than by its long, resistant surface being absolutely felt, though this last may often happen.

In the opposite, lateral half of the abdomen, the limbs are to be sought for, both by deep pressure, and by a passive laying on of the hands.

Transverse Positions.—In these the *head* and *breech* are first to be distinguished from each other as they lie in the opposite lateral segments of the abdomen.

The *back* and *limbs* are then felt for, with a view to determining whether the former is turned more to the front, or more to the back of the mother. No presenting parts will be detected, an arm or a leg being too small to be appreciable by palpation. All these signs of the position of the fœtus may not be elucidated in every case, but enough will almost invariably be made out to enable us to decide upon the presentations and positions, recognized in the classification adopted. The examiner should not, however, be satisfied until he has tried, at least, to obtain each of the data given above.

Before giving the classification, I must apologize for substituting the English term "presentation" for the exact translation of the German word "lage," which would be "position." This is all the more to be deplored, for "position" [lage] seems (though I have been unable to verify the fact) to have been specially chosen, because of the importance accorded in Germany to external examination, in which the presenting part plays but a subordinate role. The danger of being misunderstood, from the use of the term "position" in a more restricted sense in English and American treatises, seems to justify this change. As no two schools in Germany have the same classification, that used in Vienna will be given, because, in my opinion, it is the simplest and best.

The 3d and 4th occipital presentations, of English and American authors, are designated as abnormal "rotations" of the other two occipital presentations.

After the vaginal examination, in breech presentations, more exactitude is sometimes gained by accepting knee and foot presentations, as subdivisions of the first; very little stress is, however, laid upon this point, as it is devoid of all practical worth.

(The German names are added, to aid such as may occasionally refer to German text-books.)

Classification of Presentations and Positions of the Vienna School.

I.—LONGITUDINAL PRESENTATIONS.
[Längenlage.]

- **Head.** (Kopflage.)
  - **Occipital.** (Schädellage.)
    - **1st.** Back toward left side. (Rucken nach links.)
    - **2d.** Back toward right side. (Rucken nach rechts.)
  - **Face.** (Gesichtslage.)
    - **1st.** Back toward left side. (Rucken nach links.)
    - **2d.** Back toward right side. (Rucken nach rechts.)
- **Breech.** (Steisslage.)
  - **1st.** Back toward left side. (Rucken nach links.)
  - **2d.** Back toward right side. (Rucken nach rechts.)

Oblique presentations (schieflage) always change into longitudinal or transverse.

II.—TRANSVERSE PRESENTATIONS.
[Querlage.]

- **1st.** Head in left side. (Kopf links.)
  - **1st.** Position (Stellung) Back forwards. (Rucken nach vorne.)
  - **2d** Position (Stellung) Back backwards. (Rucken nach hinten.)
- **2d.** Head in right side. (Kopf rechts.)
  - **1st.** Position (Stellung) Back forwards. (Rucken nach vorne.)
  - **2d** Position (Stellung) Back backwards. (Rucken nach hinten.)

It will be observed that this classification and nomenclature are the direct result of the prominence given, in Germany, to the external examination, as all the different presentations and positions can be determined, *exclusively*, from the data thus furnished. From this are the diagnoses made, and then later confirmed, made doubtful, or, in rare cases, refuted by the vaginal examination. The division is extremely simple, and has been proved to give all the indications of real importance in practice.

Before reviewing the signs yielded by palpation, in each of the presentations and positions, I must briefly refer to the assistance furnished, in this respect, by another mode of examination.

Auscultation of the Fœtal Heart.—This may be performed, with the ear applied to the integument of the abdomen, through the medium of a sheet, or, better still, by means of a stethoscope, because this instrument may be applied to any part of the abdomen, without necessitating a constrained posture, or a congested head, on the part of the auscultator; it is open to only one objection, that the woman's abdomen must be laid bare.

It has been proved that the fœtal heart-sounds are, almost invariably, best heard through the back of the fœtus, hence at that part of the abdominal surface of the woman beneath which the back lies. This is based upon the fact that the back is generally forced, by the motions of the fœtal extremities, into immediate apposition with the uterine walls, hence the distance through the back to the auscultator's ear is less than through the breast; moreover, a considerable layer of fluid is apt to intervene between the breast and the uterine walls, a condition peculiarly unfavorable to the transmission of sound.

This rule has but one recognized exception, though, of course, unusual circumstances may render it unreliable. In face presentations, from the unnatural position of the head, the occiput being pushed back upon the vertebral column, the dorsum of the fœtus is separated from the uterine walls on that side, and the breast is thrust forward against them on the other, thus reversing the ordinary condition of things. Here the heart-sounds will best be heard in that region of the abdomen nearest to the breast of the fœtus. In all other presentations, the spot at which the fœtal heart sounds are heard with the greatest distinctness, will always guide us to the position of the back. If the back of the fœtus is directed toward the back of the mother, the heart-sounds will be but faintly audible, if at all. During contractions of the uterus, the fœtal heart-sounds are never heard.

It will now be seen how auscultation of the fœtal heart-sounds will confirm or refute the data, furnished by palpation, as to the lay of the back.

Signs Obtained in each of the Presentations and Positions through Palpation and Auscultation. 1*st Occipital.*—Head over the pubes. Breech in fundus uteri. Back in left side of abdomen, small extremities in right. Fœtal heart-sounds in left lower segment of abdomen.

2*d Occipital.*—Head and breech as above. Back and fœtal heart-sounds in right side, small extremities in left.

1*st Face.*—Head over pubes, somewhat to left. Breech in fundus somewhat to left. Small extremities in right side, also fœtal heart-sounds.

2*d Face.*—Head over pubes, somewhat to right. Breech in fundus, somewhat to right. Small extremities and fœtal heart-sounds in left side.

Oblique are merely divergencies from one or another of the occipital or transverse presentation, hence the signs will be but modifications of those found in these presentations.

1*st Breech.*—Breech over pubes. Head in fundus uteri. Back in left side of abdomen, small extremities in right.

2*d Breech.*—Breech and head as above. Back in right side, small extremities in left.

1*st Transverse.*—Head in left side, breech in right.

1*st Position.*—Back forwards. Small extremities backwards. Heart-sounds heard.

2*d Position.*—Back backwards. Small extremities. forwards. Heart-sounds not heard, or but very faintly.

2*d Transverse.*—Head in right side, breech in left.

1*st Position* as in first transverse.

2*d Position* as in first transverse.

The Diagnosis of Twins is, in general, very uncertain, and, in primiparæ, rarely successful. A depression running across the abdomen is rather the exception than the rule, and, even if present, is not conclusive. Up to the tenth lunar month, the two fœtuses are so movable that they yield but few data on which to base a diagnosis. During the tenth lunar month the following signs, if satisfactorily made out, will justify us in pronouncing in favor of twins, yet there is no condition in midwifery which so frequently baffles the skill of the most experienced obstetricians as this.

1st. The recognition, by palpation, of several similar large fœtal parts (head or breech). Perhaps, while one is deep in the pelvis, two others may be felt through the abdomen.

2d. The recognition, by palpation, of numerous, small, movable, fœtal parts (legs and arms), or their spontaneous motions in several regions of the abdomen.

3d. The exact diagnosis, by palpation, of position of each fœtus.

4th. The immobility of the presenting part (as revealed by palpation and vaginal examination), especially after evacuation of the liquor amnii, while the parts felt through the abdominal walls are very movable.

5th. The perception, by auscultation, of the fœtal heart-sounds at two opposite sides of the abdomen, while they are inaudible in the intervening space.

6th. A striking want of accord between the presenting part (as revealed by palpation and vaginal examination) and the place of the heart-sounds.

In general, an unusual size of the abdomen, a lateral distention of the uterus, the sensation, by the mother, of fœtal motions in many regions are signs of subordinate value, but should, at least, raise suspicions of a multiple pregnancy.

The Signs of Extra-uterine Pregnancy revealed to palpation vary so greatly in different cases, that scarcely any rule can be given for them. The chief peculiarity is the presence of two abdominal tumors, one being the fœtus with its enclosing cyst, in which, early in the pregnancy, movable, resistant parts may be felt, and later even the presentation, &c., of the fœtus be determined; the second tumor is the uterus, somewhat enlarged, but not so much so as the supposed duration of the pregnancy would require. Until the fœtal parts, or their motions, can be made out, or the fœtal heart-sounds can be heard, extra-uterine pregnancy cannot be diagnosticated, by external examination, from any other cystic tumor.

[To be concluded.]

A CASE OF FATAL NARCOTISM

IN A CHILD FOURTEEN DAYS OLD; PROBABLY INDUCED BY A DOSE OF CHLORAL AND MORPHIA ADMINISTERED TO THE MOTHER.

By William H. Campbell, M.D. Harv.

Mrs. W., aged 16 years, was delivered, on the 13th of June, of a fine healthy boy, weighing ten pounds.

On the evening of the 26th, I was called to see the mother, and found her complaining of severe pain in the left iliac region, and ordered an enema of soap and water, which produced free dejections, and relieved the pain. But on next day, the patient being very "nervous," to relieve the agitation and distress, I ordered fifteen grains of chloral hydrate and a fourth of a grain of sulphate of morphine in solution, with directions to repeat if necessary. She took one dose, only, and was soon relieved. About three-quarters of an hour after taking the dose (about a quarter to nine in the morning), she nursed her child who, to all appearances, was perfectly well at the time. But soon afterwards he became very quiet; went to sleep, and was unnoticed till 11 o'clock. At that time, he was observed to be breathing badly, and almost immediately became convulsed.

I saw him about 2½, P.M., at which time the breathing was slow and sighing, being at times entirely suspended for many seconds. The cardiac sounds were tardy and irregular, and the pulse almost imperceptible. The skin was cool. The pupils were contracted to mere points.

I remained with him an hour or more, during which time the pulse ceased at the wrist, the breathing became suspended, and the heart's action, becoming slower and slower, at last apparently ceased. Artificial respiration was resorted to, and was partially successful; even the pulse was for a considerable time quite perceptible at the wrist.

I ordered applications of heat externally, and caused him to be continually roused from his tendency to slumber.

For a time, the heart and lungs were kept at work, but the coma gradually deepened, and he died at 10½, P.M., about thirteen hours after the nursing of the supposed poisonous milk.

Strict inquiry was made, and no other source of poisoning could be discovered.

Certain it is that he had the symptoms I have before observed in little children, who had been poisoned by opium.

We know the effect on nursing children of drugs taken by the mother, cathartics for instance, and I have seen infants made very drowsy from opiates so administered; but I can hardly believe that one-fourth of a grain of morphine taken by this mother, could have produced such a deadly effect upon the child.

Still, as no other cause of the symptoms and death can be discovered, may it not be possible that the chloral hydrate rendered the morphine more dangerous than it would have been by itself.

Any observations on the effects of chloral hydrate on very young or nursing children would, in the present imperfect knowledge on the subject, be an useful addition to medical science. In this view the foregoing case is put on record.

1328 *Tremont St., July,* 1872.

Transfusion.—Dr. W. S. Playfair reports (*London Lancet* Jan. 27) a case of transfusion in post-partum hæmorrhage, unsuccessful from return of hæmorrhage.

Reports of Medical Societies.

SELECTIONS FROM THE RECORDS OF THE OBSTETRICAL SOCIETY OF BOSTON.

SECRETARY, W. L. RICHARDSON, M.D.

FEB. 10, 1872.—The President, Dr. Read, in the chair.

Uterine Hæmorrhage. Tumor.—Dr. Buckingham said that he had been called, Jan. 24th, to see a widow lady, 42 years of age, the mother of five children. She had been suffering from severe hæmorrhages, recurring with more or less severity at varying intervals for several months. She stated that the catamenial irregularity began the first of last June, when she went out of town for the summer. Since that time the discharge had appeared bi-monthly. She returned to the city the last of September. At present, the flow lasts about ten days, and in the intervals there is a perfectly white, inodorous discharge. The physician who was first called to see her had expressed his opinion that it was "the change of life." This diagnosis was made without any vaginal examination. She had been passing large clots unaccompanied by any pain until the afternoon of Dr. Buckingham's first visit, when, after discharging a large clot, she was seized with a severe pain in the uterine region. Her appearance was very markedly anæmic. She was almost blanched. The abdomen was flat. In the pubic region, and inclined to the right of the vertebral column, a tumor could be felt, the exact size of which was not ascertained, owing to the profuse hæmorrhage which demanded immediate attention. The slightest attempt to introduce the speculum only increased the flowing. A finger passed into the vagina detected a small, irregularly-formed tumor, its surface being furrowed, and feeling very much like that of a pine cone. The anterior lip of the cervix uteri could be felt apparently embracing it. The slightest touching of this tumor increased the hæmorrhage. An injection of equal parts of Monsel's solution and water was thrown into the vagina. Laudanum, in drachm doses, frequently repeated, was ordered as a stimulant. Four hours later, Dr. Buckingham saw her again. She had taken half an ounce of laudanum without its producing any narcotic effect, and had vomited once. The hæmorrhage had ceased. The skin was moist and warm. From that time to the present an injection of Monsel's solution and water had been thrown once, and sometimes twice, daily into the vagina. The amount of the iron used has been gradually diminished to the proportion of one-fifth iron and four-fifths water. The patient is greatly prostrated. The pulse is feeble and rapid. More or less nausea has been complained of till within the past few days, when the appetite began to improve. There has not been the slightest hæmorrhage since the first injection of the iron. At first, the injections came away from the vagina having a dirty, brownish, opaque appearance, with a copious, snuff-colored sediment, resembling wet carbonate of iron. Occasionally, little white shreds were observed, and the discharge had always more or less of a purulent character. On making a vaginal examination, Feb. 10th, the tumor was still easily felt, occupying the hollow of the sacrum. Owing to the great abdominal tenderness it was impossible to ascertain its probable point of attachment. The cervix uteri could not be felt. The question was whether it was attached to the cervix, or whether the uterus was inverted, the tumor being attached to the fundus. A portion of the tumor was removed, causing considerable pain. There was no offensive odor connected with it. The specimen was shown to the Society.

Dr. Fifield said that, judging from the gross appearances, the tumor seemed to resemble the so-called "cauliflower excrescence." Many years ago, he had seen a similar case, in which the tumor was removed by the ecraseur. It soon returned, however, with a very rapid growth and the patient died. He alluded to the fact that cancer of the posterior wall of the rectum is sometimes found in connection with malignant disease of the uterus. He had seen one such case in consultation.

Dr. Swan, who had examined the specimen under the microscope, said that it appeared to be a cellular rather than a fibrous growth. It was very juicy. The cells were more or less irregular in shape, with distinct nuclei and often nucleoli. It was apparently of very active growth. As a stroma, a slight, fibrous structure could be made out. Occasionally, traces of fatty degeneration were seen. He had never seen such appearances in a fibrous tumor of the uterus.

Dr. Ellis, who was present by invitation, said that he should be inclined, from a superficial examination, to place the tumor among the sarcomas. It was evidently a cell growth and not of an innocent character. It would properly be classed among the semi-malignant growths.

High Specific Gravity in Bright's Disease.—Dr. Fifield said he had recently been called to see a case of Bright's Disease, in which the specific gravity was as high as 1035. A very careful examination failed to detect any sugar. There were no casts, but crystals of urate of soda were to be seen under the microscope. He said he had not been able to find mention made of a high specific gravity in this disease in any of the medical works he had consulted.

Dr. Sinclair had seen it as high as 1020.

Dr. Buckingham had a case at present under his care in which the urine, examined weekly for a long time, had only once had a specific gravity below 1025.

Dr. Richardson said that Oppolzer taught that a high specific gravity was by no means uncommon in acute Bright's Disease.

Uterine Hæmorrhage. Dr. Buckingham reported the following case. A young married lady, the mother of two children, was seized with a profuse hæmorrhage while on a voyage from Hong Kong to San Francisco. A second attack occurred in San Francisco, and a third on reaching her home in this part of the country. Before Dr. Buckingham saw her, she had been flowing about thirty-three or four days. She was very anæmic. The sound entered the uterus to a depth of several inches. Tents were introduced, but nothing abnormal was discovered. An injection of equal parts of Monsel's solution and water was thrown up to the fundus uteri, a tube being left in the os. The injection was continued till it returned bloodless. For thirty-five days there was no hæmorrhage. At the end of that time, a discharge resembling in appearance and duration the catamenial flow appeared. This returned in twenty-eight days, and the patient has experienced no further difficulty.

Dr. Lyman said that he had under his care a lady, 52 years of age, who suffered monthly, and occasionally bi-monthly, from a copious hæmorrhage. Her last child is now 12 years of age. Once or twice during the last two or three years, the flowing had been so great as to alarm her friends. Meanwhile, there was no impairment of her general health. A year and a half ago, the os was dilated with a great deal of difficulty. The sound entered 3½ inches. A month ago, a second dilatation was made, owing to the patient's having had another severe hæmorrhage. The sound now entered 6¼ inches. No tumor could be discovered by external manipulation. A pair of surgical forceps were introduced and, being opened, were turned about, but no tumor was detected. The forceps were then closed and withdrawn, bringing with them a large mass, madè up apparently of the uterine mucous membrane. He considered that the unusual depth of the uterine cavity was caused by a cervical elongation. There was, also, probably, an hypertrophied condition of the mucous membrane of the uterus, or, possibly, a growth of mucous polypi.

Dr. Sinclair said that when he was house-physician at the Mass. General Hospital, he had seen a case very similar to this. The uterus in that case measured between six and seven inches in length.

Case of Cephalhæmatoma.—Dr. Abbot said that he was recently called to attend a lady, 38 years old, in her first confinement. Owing to insufficiency in the uterine contractions in the last stage of labor, the forceps was used. The delivery was accomplished with very little effort. A large tumor occupied the posterior half of the right parietal bone, resembling a caput succedaneum. It was very tense, and contained as much as four ounces of fluid. There was no discoloration of the skin. Beneath the tumor was an apparent depression, surrounded by a hard, bony-feeling ridge. The sagittal suture was unusually broad, and the anterior fontanelle very large. Iodide of potassium was prescribed, under the impression that there might be a communication between the cavity of the tumor and the interior of the skull, and with the hope of exciting absorption of the fluid. The tumor has been gradually subsiding, and at present contains perhaps one or two drachms of fluid. Many years ago, he had seen a similar tumor situated over the occipital bone. The child died at the end of a year of pneumonia. At the autopsy, an opening was found through the occipital bone at the median line, under the base of the site of the tumor. In regard to the origin of these tumors, Dr. Abbot quoted Rokitansky as saying that they are owing to a hæmorrhage under the pericranium which separates it from the cranium. Unless it is absorbed, the pericranium takes on a new formation of bone. Occasionally these tumors inflame and suppurate, giving rise to disastrous consequences.

[At the present time the tumor has entirely disappeared, leaving no trace of its existence. Before it was wholly absorbed, its surface had acquired a sort of parchment feel on pressure, as if from a cartilaginous thickening; the condition said by some writers to indicate commencing ossification of the envelope. The position of the tumor was such that it could not have been caused by the forceps.—A.]

Dr. Sinclair said that he had seen one case in which the tumor lasted three or four weeks and then entirely disappeared.

Dr. Cotting had opened one such tumor, which had then rapidly disappeared.

Dr. Read had twice opened tumors of this kind with good results, and in two other cases in which he had not interfered they had disappeared after a longer or shorter time.

Dr. Richardson alluded to the advice of Wiederhofer, in Vienna, to always let such tumors alone. The results being, as a rule, better than where they are opened.

Dr. Edson had seen two cases, both of which had been opened with good result, the contents being a reddish serum, and not blood.

Dr. Cotting thought that the propriety of the operation in these cases should be decided upon other grounds than because the tumor was a bloody one—as in other bloody tumors.

Dr. Read said he had once opened a bloody tumor just below the right trochanter in a gentleman who had been thrown from a vehicle. A large amount of bloody serum was discharged, but within forty-eight hours it had filled up again.

Effect of Ether on Uterine Contractions.—Dr. Abbot said he had recently attended a lady in her second confinement. During her first labor, which occurred in Edinburgh, she had been kept for a considerable time in an unconscious state under chloroform, the child being finally delivered by forceps. The second labor was short. Ether was given in the advanced stage, but whenever the patient got fairly under its influence, so that the voluntary muscles ceased to act, the uterine contractions ceased, and he was obliged to reduce it to the smallest quantity, so as merely to moderate the pain. When the child was born, it was made to breathe with the greatest difficulty. A frothy mucus streamed from the nostrils in large quantity. Dr. Abbot said that he had no doubt the child would have been born dead from the delay caused by the ether had its use been continued in quantity sufficient to cause insensibility. He was inclined to believe that the forceps had been rendered necessary in the patient's first confinement by the full administration of chloroform. Dr. Abbot said that he mentioned this case on account of the apparent conviction of some gentlemen that the full use of anæsthetics in labor never interferes with the expulsive action of the uterus.

Medical and Surgical Journal.

BOSTON: THURSDAY, AUGUST 15, 1872.

HARVARD AND MEDICAL EDUCATION.

SEVERAL times of late we have had occasion to speak of the course of instruction in medicine at Harvard, and we are glad to reiterate our testimony with regard to the present and prospective success of the new scheme.

The students, who have passed their first and second years' examinations at Harvard, speak well of the new course. They bear the work better than they used to under the old system, and taking their different studies in proper course, they understand their work better. That some good changes may be made in the course of study, we have no doubt. It would be absurd for any one to expect, that the course would be laid out in the best manner at once. It will take numerous trials to make all the machinery operate well together, and it will be strange indeed, if every year does not find some improvement to be made. We are not anxious to have that day come, when there can be no more progress, for we believe, that when progress stops, it is no sign of perfection in the work, but that the workmen are beginning to deteriorate.

If Harvard only keeps on as it has begun, we think our friends in Nashville will not be unlikely to ask by-and-by "Does he write M.D. Harv. after his name?" At first it may seem like a bit of conceit to do so, but the day may come, when it will be important for a man to know where he was born into the medical world.

Harvard has thus far lost a large number of students, consequent upon the change. Upon inquiry, we find that they have been mostly from the British Provinces, and it is by no means unlikely, that others may stay away, who would otherwise come to Boston. What then? Is that going to kill the Harvard School? By no means. We know too well the material of which its officers are made up: and more than that, we know the material of which the medical profession is made. The faculty means work, the Medical Profession means work, and though there are croakers everywhere, the Medical Profession will back the faculty.

"You are mistaken, the Medical Profession care nothing for Harvard," says one, "The men who have obtained their degree, do not care to help along a school which is going to take away their personal students. The man who is going to practise medicine does not care where his degree comes from, so long as he has it." To this we reply, that the Medical Society of this State have already, publicly endorsed the Harvard movement. The men who have had office-students are the men who made the endorsement. Lastly, the man who has no degree oftentimes adds the M.D. to his name, because he knows its value; but he also knows, that he cannot buy the right to add Harv. or Penn., or any other respectable abbreviations to his name, and that should he do so, he would, at once, be marked as an impostor to be avoided.

But look at the position of the Harvard School with the most desponding eyes. Then what? "Why, Harvard must fail," says our friend, "and *get off her stilts and return to her old way*. She must become American again *and pole along her old American keel at four months*."

We do not agree at all with this view. If the Medical profession of Massachusetts are not prepared to support this school in its endeavors; if the whole profession of the country does not directly or indirectly give their confidence to it, the Harvard Medical School would do better to die, than to go back to the old, absurd plan of medical study, for the mere sake of keeping alive: and the sooner its funeral obsequies can be performed the better.

"TURNED TERRORIST."

THE *London Medical Times and Gazette* has again (July 13th, 1872) assailed the Lyons Medical Society for its position in regard to the use of chloroform as an anæsthetic, and especially M. Diday, whom it would stigmatize as a "terrorist." In a fatal case of its use, M. Diday said, as reported in the *Times*, that he would never recommend direct denunciation of a fellow practitioner, but if called before a legal tribunal he should, remembering that he was a man first and then a doctor, declare to the court what he believed to be the truth, even at the risk of proving prejudicial to the accused operator. M. Diday then offered resolutions for the Society to adopt and to publish for the moral benefit they would exert upon surgeons by making them aware of their responsibility in case of disaster. We quote from the *Times*:—

"The resolutions in question are seven in number. The first six we need not quote, merely stating that they insist in the most absolute manner on the vast superiority and infinitesimal dangers of ether. The seventh is as follows:—

"'In face of these undeniable facts, this Society, appealing to the reason and the loyalty of heart of those of its *confrères* who continue to employ chloroform, entreats of them to decide for themselves whether a surgeon who, able to attain his ends as well, if not better, by means of a less dangerous agent, voluntarily resorts to the most dangerous one, does not assume the same moral responsibility as would a practitioner who, in reference to protection from smallpox, practised at the present day inoculation in preference to vaccination.'

"We owe some apology to our readers," continues the *Times*, "for occupying space with nonsense such as this; but without doing so we could convey no idea of this attempt to set up medical terrorism in so large and enlightened a city. It is nothing less; for who, in face of such an anticipatory denunciation as this, would venture to resort to an agent, mishap during the employment of which might ruin his reputation and bring him under the tender mercies of French law. Fortunately, the orator's audience was not carried away by his declamation, and referred his damnatory conclusions to a committee, wherein we hope common sense and impartiality may not be without their advocates."

A little "common-sense and impartiality" one would expect to influence any but the *Times and Gazette* and "fanatical" (that is the pleasant word our contemporary has for those on the other side) advocates of a deadly drug, the *unnecessary* use of which has *already killed hundreds!* Surely, if professional respect for life is not sufficient, the law itself should interpose for the safety of those who seek relief, not death, at the hands of operators. We hope the Lyons Society will have the common-sense to pass and publish the resolutions, and thus aid in stopping the worse than "nonsense" we have been obliged to listen to so long in favor of this homicidal practice.

The Hospitals.

MASSACHUSETTS GENERAL HOSPITAL.

Inflammation of the Portal Vein; Numerous Abscesses in the Liver; Enormous enlargement of that Organ; Death; Autopsy. [Service of Dr. Ellis.]

On Oct. 16, 1871, a Prussian weaver, 18 years of age, entered the Hospital. He stated that his general health had always been good, though he had worked hard and had been troubled by pain in the chest without cough, for the preceding three months.

Nineteen days previous, after drinking two dippersful of ice water while in a heated condition, he was obliged to give up work at once and go to bed with pain in the epigastrium and diarrhœa, followed by prostration, chills, thirst, loss of appetite and vomiting. From that time to his admission, his diarrhœa had been constant, amounting to several discharges daily. Two or three times, there had been a slight epistaxis. His skin was observed to be hot and dry, tongue thickly furred, brown and dry in the centre, pulse 96. Temperature 104½° F., respiration 32 and mostly thoracic. No rose spots were found, nor did the tenderness of the epigastrium extend to the lower part of the abdomen. His face was pale, and expression dull. The morning after entrance he had a chill, followed by heat. The chill was repeated on the evening of the next day and followed by a wakeful night, and he continued from day to day to have chills at irregular intervals. The temperature varied from 98° F. to 104° F. The pulse remained somewhat rapid, but rarely rose above 100. The dejections, two or three in number on each day, were semi-solid and of a light yellowish-brown color. The mind remained perfectly clear. On some days the chill was absent, but was replaced by perspiration at various times during the twenty-four hours. There was nothing worthy of note in the urine, which contained no albumen nor bile pigment. At the end of the first week he vomited, with much retching, a small quantity of light green mucus; complained constantly of being tired, and his prostration increased. During the second week the pulse became more rapid, sometimes reaching 136, the respiration being 36. The epigastrium became more tender, and chills and sweating still continued.

A physical examination showed the apex beat of the heart to be under the fourth rib, and somewhat removed to the left. The pulsation was very distinct, while there was none below in the ordinary seat. To the left of the sternum, below the second rib, there were noticed marked accentuation of the second sound, and a systolic souffle. At this point the pulsation was marked. There was puerile respiration in the upper part of both lungs, more especially the right, but no respiratory murmur in the lower part of the lungs in front, below the line of dulness. The pulsation of the veins of the neck was increased. The epigastrium was extremely tender, and the area of dulness was very extensive. In front it covered both sides of the body, reaching from a line drawn horizontally through the umbilicus up to a level with the fourth rib on the right side and the second on the left side of the chest. Just below the line of dulness on the left side was a feeling of resistance as from the edge of some solid body. The abdomen above this line was somewhat protuberant, as from inward pressure. Both pupils and both pulses were equal. The pulses of the posterior tibial and of the radial were also equal. There was much complaint of pain in the right hip, preventing his lying on that side, and requiring opiates. Beef-tea was ordered, but he continued to lose strength. During the third week, the diarrhœa ceased, and defecation was accomplished by enemata. The sweating became extreme, his pillow being soaked with it. The pulsation of the heart was now communicated to the whole region of the abdomen. The face was flushed, while the skin of the hands was cool. He continued to take large amounts of beef-tea (60 oz. per diem), and morphine for the pain in the hip.

Towards the close of the third week, the pain in the hip and vomiting became continual. Pulse 130. The souffle heard over the pulmonary valves disappeared. The face and conjunctiva were of a distinct yellow hue.

In the fourth week, matters continued to grow worse. Pulse 140. Respiration 40, and labored. The urine was acid, of greenish color, and contained bile-pigment and a precipitate of urates. Emaciation became more marked. The dulness in the back now extended up to the lower angle of the scapula. The prominence of the epigastric region was more marked. Towards the latter part of the week, the patient began to look more sunken. Sordes on the teeth became abundant, and there was some epistaxis. Two days before death, the fluttering pulse rose to 148, while respiration declined to 20. Death took place on the 29th day after entrance.

Autopsy by Dr. Fitz, 26 Hours Post Mortem.—The skin and conjunctiva were intensely yellow. No rigor mortis. The pericardium contained 12 ounces of clear, yellow serum. Old pleural adhesions were abundant, especially on the left side of the chest. In the left pleural cavity was ℥viij. of serum, and the lung was compressed. There was some air in the lower lobe of both lungs, which had a yellowish tinge. There was a moderate amount of œdema pulmonum.

In the peritoneal cavity was a pint of opaque yellow fluid, containing several small, soft, fibrinous coagula. The peritoneum was normal except the surfaces of the diaphragm and liver which were united by delicate, soft, friable adhesions.

The spleen was at least three times the normal size. Weight 1½ pounds. The follicles were enlarged to a considerable degree, and the pulp also increased in volume.

The kidneys were somewhat larger than usual, and the capsules easily detached. On section, the organ was anæmic, yellow, the cortical substance increased in volume, the tubules opaque, and the Malpighian bodies indistinct. Under the microscope, the epithelium of the cortex was faintly granular [parenchymatous nephritis].

The liver was enormously enlarged, extending downwards into the right iliac fossa and upwards to a point an inch and a half below the left axillary space. Weight, 13 lbs. 2 oz. Greatest transverse diameter, 13 inches; greatest thickness, 4½ inches. The capsule in general was smooth and transparent, except at the superior portion, where the adhesions existed. The left lobe was softer than ordinary. The fibrous tissue surrounding the vessels in the portal fissure was swollen, opaque and œdematous, suggestive of cellular as well as of serous infiltration. Where Glisson's capsule entered the liver, recent adhesions existed between the peritoneal investments, from which, when torn apart, a yellow, purulent fluid exuded, apparently from the interior of the liver. The portal vein, outside the liver, contained an obstructing thrombus, red outside, decolorized within. There were no coagula in the hepatic vein or artery.

On making a section through the liver, its interior presented numerous abscesses, all more or less connected with each other, or at all events in immediate relation. In the right lobe was a large central abscess, with dark-yellow ragged walls, filled with opaque yellow pus. Connected with it were other smaller abscesses, and still smaller ones, of the size of peas, were found without such soft centres or so distinct a coloration. A similar state of things existed in the left lobe, except that the central abscess was nearer the surface. The thrombus of the portal vein was softened just within the liver and the vein considerably disturbed. The softened mass exactly resembled the contents of the abscess. Farther in, a short distance beyond the softened part of the thrombus, the calibre of the vein became smaller, the thrombus still obstructing and softened centrally, and then the vein opened freely into the central abscess. This was the same in both lobes.

The acini of the liver were enormously enlarged, at least thrice. Microscopically, the cells of the liver were enlarged, cloudy, near the abscess converted into granular debris and the interstitial tissue largely infiltrated with cells.

The gall bladder contained two ounces of a gruel-like fluid, in no way resembling bile. The cystic and common ducts were open. Peyer's patches and the solitary glands presented minute pigmented spots. The mesenteric glands were much enlarged. Periphlebitis suppurativa existed about the superior mesenteric vein near its entrance into the portal.

As the patient could not give a very good account of himself, owing to a want of intelligence or ignorance of the English language, the diagnosis of the case presented various difficulties.

The diarrhœa, epistaxis, prostration and some other symptoms suggested typhoid fever, but the persistence and frequent occurrence of chills and rigors pointed very strongly to some other affection of an acute inflammatory character, in which suppuration had probably taken place. The extensive dulness occupying the lower part of the chest and upper part of the abdomen, fixed the attention at once upon these regions. The absence of respiration and all morbid auscultatory signs, showed the integrity of the lungs, while the fixed character of the line of dulness on change of position made it unlikely that there was any effusion in the pleural cavities.

It seemed very probable, therefore, that the dulness was attributable to the upward pressure of the diaphragm by the parts below it. This also explained satisfactorily the position of the apex-beat of the heart, as that organ must also have been forced upward. The pulsation, souffle and accentuation of the second sound were also attributable to the change of position, as nothing in the history indicated previous cardiac disturbance.

The disease being below the diaphragm its exact seat and character were to be ascertained. It was evident that this upward pressure must be the result either of the enlargement of the liver and perhaps other organs or of the presence of some new formation, liquid or solid. Until the jaundice manifested itself no symptom pointed directly to the liver, and as this biliary derangement might be the result of some functional disturbance, it could not be relied upon as evidence of fatal hepatic disease. Repeated examinations were made with the hope of detecting the lower edge of the viscus, but nothing was ever found except the outline of a solid body in the left hypochondrium occupying the seat of an enlarged spleen. This fact, taken in connection with the extent of the dulness, which would indicate an *acute* enlargement of the liver greater than has ever been noticed, led us to explain the change in some other way. The solid new formations require more time for their development, and when they attain such size are almost inevitably tangible. We were therefore reduced to the supposition that fluid, probably of a purulent character, circumscribed by adhesion, was the principal cause of the dulness and that the liver if diseased was secondarily so. The examination showed that the view taken of the abdominal disease was incorrect. The error was principally attributable to the impossibility of detecting the lower edge of the enlarged liver. This same difficulty was met with in a similar case seen since, and again prevented a positive diagnosis though the disease was suspected.

[The pulsation could be explained by the continuous retention of the anterior surface of the heart against the wall of the chest and the souffle by the flexion of the vessel. An accentuation implies an obstacle to the free circulation of the blood; such might be found in the diminished area of the lungs and perhaps in the position of the vessels. The same obstacle might also increase the pulsation which was so marked to the eye.—E.]

U. S. MARINE HOSPITAL; CHELSEA.

Compound Fracture of Femur; *Recovery.*

[Dr. A. B. Bancroft, surgeon in charge.]

J. S., aged 35, sailor. Patient while furling sail fell a distance of about thirty feet to the deck, causing a compound fracture of the right femur in the middle third. So great was the force of the fall that the broken ends of the bone penetrated the soft tissues of the thigh on its outer aspect. A small portion of one of the fragments was imbedded in the planking of the deck. The accident occurring at sea the man received no surgical treatment for a month, when he was admitted to the hospital.

On entrance, there were two openings in the outer aspect of the thigh communicating with the bone and discharging a considerable quantity of laudable pus. The fracture was firmly united with marked deformity; the fragments overriding and causing about two inches of shortening. His general condition was good. He was etherized and the femur refractured. Extension with a weight and an outside splint, extending from the axilla to the foot, were applied to the limb. Sand bags were placed on each side of the leg to render the apparatus more firm. His diet was nourishing and one pint of ale was allowed him daily. In four weeks from the time of entrance the union of the fracture was assured; in nine weeks it was quite firm, and at the expiration of eleven weeks the patient was permitted to leave his bed. There was only 3-4 of an inch shortening, and although there was some false anchylosis of the knee joint consequent upon the long confinement in bed, he left the hospital walking well with the aid of a crutch.

◆

Ovulation in Hens.—The ovary of a hen is said to contain about six hundred embryo eggs, of which, in the first year, not more than twenty are matured. The second year produces one hundred and twenty; the third, one hundred and thirty-five; the fourth, one hundred and fourteen; and in the following four years the number decreases by twenty yearly.

Medical Miscellany.

Charlestown Dispensary.—The resignation of Dr. J. A. McArthur as one of the Physicians of the Charlestown Dispensary was accepted at the last meeting of the Board of Managers. The vacancy has not as yet been filled.

The new buildings of the Hotel-Dieu, Paris, which were nearly completed when the war broke out, will, it is understood, be finished without further delay by the Conseil Municipal. There are twelve other Hospitals in Paris.

The value of vaccination and re-vaccination is becoming generally appreciated. Marshal McMahon has given orders for the entire army of Paris to be vaccinated or re-vaccinated. A measure has been submitted lately to the Chilian Congress to make vaccination compulsory. The question of passing some legislative enactment on this subject is at present under discussion before the States-General of the Netherlands.

Deaths from Chloroform.—On June 8th a man, aged 36, was placed under chloroform to have an operation on his jaws performed, and two minutes after the chloroform was given he expired. A verdict was given that he died of paralysis of the heart caused by chloroform.

May 27th, a patient died of chloroform while being operated on for osteomyelitis of the femur by Prof. Billroth in Vienna. Tracheotomy was done, but the attempt to save the patient's life failed.

Pepsine.—Careful analysis of this drug, as manufactured by three of the leading chemists of London—Savory & Moore, Squire, and Morson—proved it to have "scarcely any," "very slight," and "extremely slight digestive power." It is therefore useless as a drug, unless, as is possible, it may have "other virtues not purely chemical."

Zinc Water-Tanks.—Of the unhealthfulness of these for domestic purposes, there would seem to be no doubt. A recent French periodical contains an article by M. Zinrek, who had examined water which had long been kept in such tanks, and who has found that the water dissolves so much the more zinc as it contains more chlorides, such, for example, as the chloride of sodium. The water also takes up larger quantities of zinc in proportion to the length of contact. Boiling does not, however, precipitate the zinc from water charged with the metal. A sample of the former was tried, in which the chlorides were in small proportion, but which had been a long time in a zinc tank; as much as 15 grains of zinc was found in each quart. To prevent this state of things, M. Zinrek advises that the tanks be coated inside with an oil paint, with ochre or asphalt for the base; but no minium, ceruse, or carbonate of zinc should be used.

Correction.—In the advertisement of the Cleveland Medical College, in our issues of Aug. 1 and 8, the word "Phrenology" was accidentally substituted for *Pharmacy*, in the Professorship of Dr. John E. Darby.

Books Received.—A Manual of Qualitative Analysis. By Robert Galloway, F.C.S., &c. From the Fifth London Edition. Philadelphia: H. C. Lea. 1872. (From the Publisher.)—Diseases of the Throat. By J. Solis Cohen, M.D., &c. New York: William Wood & Co. 1872. (From the Publishers.)—The Physiology of Man. The Nervous System. By Austin Flint, Jr., M.D. New York: D. Appleton & Co. 1872. (From the Publishers.)—A System of Surgery. By S. D. Gross, M.D., LL.D., D.C.L., &c. Fifth Edition. In two Volumes. Philadelphia: Henry C. Lea. 1872. (From the Publisher.)—The Ten Laws of Health; or how Disease is produced and can be prevented. By J. R. Black, M.D. Philadelphia: J. B. Lippincott & Co. 1872.—Thermic Fever, or Sunstroke. By H. C. Wood, Jr., M.D. Philadelphia: J. B. Lippincott & Co. 1872.

Pamphlets Received.—The Use of Pepsine in the Diarrhœa of Infants. By James S. Hawley, M.D., Brooklyn, N. Y. Pp. 16.—Catalogue of the Graduates and Officers of the Medical Department ot the University of the City of New York. Published by the Alumni Association. Pp. 112.—The Medical Society of Ohio—The Annual Address of the Retiring President, W. W. Dawson, M.D., Cincinnati.—Recept-Formulare aus der Wiener Klinik fur Syphilitische des Professors v. Sigmund. Wien. Pp. 66.—Sur un nouveau Dissolvant de l'Iodure Plombique et de son Application à la Pharmacie. Par Donato Tommasi, Docteur ès Sciences. Paris. Pp. 8.—Hematuria Endemica. These de Concurso do Dr. José Luiz de Almeda Conto. Bahia.—Eusaio sobre o Beriberi no Brazil. Por Dr. J. F. Silva Lima. Bahia.

Died,—In Chelsea, 5th inst., George W. Otis, M.D., aged 72.

Deaths in fifteen Cities and Towns of Massachusetts, for the week ending August 3, 1872.

Cities and Towns.	*No. of Deaths.*
Boston	206
Charlestown	16
Worcester	40
Lowell	26
Milford	9
Chelsea	9
Cambridge	30
Salem	21
Lawrence	15
Springfield	8
Lynn	28
Gloucester	14
Taunton	5
Somerville	17
Haverhill	9
	453

Prevalent Diseases.

Cholera Infantum	156
Consumption	42
Dysentery & Diarrhœa	28
Typhoid Fever	15
Pneumonia	14
Cholera Morbus	9
Whooping Cough	8

Six deaths from smallpox occurred in Boston. Of the deaths from intestinal disorders, ninety were in Boston, eighteen in Lynn, eighteen in Worcester, eleven in Cambridge, nine in Somerville, and eight in Gloucester. Of deaths from typhoid fever, seven were in Boston.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending Saturday, August 10th, 191. Males, 98; females, 93. Accident, 3—apoplexy, 1—inflammation of the bowels, 3—bronchitis, 2—inflammation of brain, 4—disease of brain, 3—burned, 1—cancer, 1—cyanosis, 4—cholera infantum, 64—cholera morbus, 2—consumption, 17—convulsions, 4—debility, 3—diarrhœa, 11—dropsy, 2—dropsy of brain, 7—dysentery, 4—delirium tremens, 1—erysipelas, 1—scarlet fever, 5—typhoid fever, 4—disease of heart, 7—disease of hip, 1—infantile disease, 1—intemperance, 3—disease of the kidneys, 2—congestion of the lungs, 1—inflammation of the lungs, 7—metritis, 1—marasmus, 4—measles, 1—old age, 3—paralysis, 3—premature birth, 2—peritonitis, 1—suicide, 1—smallpox, 4—disease of spine, 1—unknown, 2.

Under 5 years of age, 105—between 5 and 20 years, 7—between 20 and 40 years, 38—between 40 and 60 years, 19—above 60 years, 22. Born in the United States, 140—Ireland, 38—other places, 13.